

**Chapter 5 Preview**  
Linear Inequalities  
Algebra 1B

Name \_\_\_\_\_

Date \_\_\_\_\_

**Define the following:**

1. Set-builder notation
2. Compound inequality
3. Intersection
4. Union
5. Boundary
6. Half-plane
7. Closed half-plane
8. Open half-plane

**You *should* be able to do the following objectives:**

1. Solve and graph inequalities with addition or subtraction
  - a. Compare and contrast the graphs of  $a < 4$  and  $a \leq 4$ .
2. Solve and graph inequalities with multiplication or division
  - a. Explain the circumstances under which the inequality symbol changes directions. Use examples to support your explanation.
3. Solve multi-step inequalities
  - a. How could you solve  $-3p + 7 > 2$  without multiplying or dividing each side by a negative number.
4. Solve compound inequalities
  - a. Write a compound inequality for which the graph is the empty set and one for which the graph is the set of all real numbers.
5. Solve inequalities that have absolute value
  - a. Demonstrate why the solution of  $|t| > 0$  is not all real numbers. Explain your reasoning
6. Graph linear inequalities?
  - a. Summarize the steps to graph an inequality in two variables.

If you can give a good definition for each term without having to look it up, then you should be ready to identify these terms for application. If you can describe a method as to how to perform each of the objectives, then you should be ready to perform these tasks. If there are any terms or objectives that you are unsure about, then these are the things you want to take extra time studying.